

CLAIMS

What is claimed is:

1. A device for correcting spinal deformities, comprising:
a support member adapted to be mounted onto a portion of a spine; and
5 an anchor member adapted to join a portion of the support member to a deformed spine portion;
wherein the support member is capable of providing a constant or substantially constant correction force to the deformed spine portion and maintains the constant or substantially constant correction force until the spinal deformities are fully or substantially
10 fully corrected.
2. The correction device of claim 1, wherein the elastic material comprises a superelastic or pseudoelastic material.
3. The correction device of claim 2, wherein the superelastic material has a transition temperature within the range of body temperature.
- 15 4. The correction device of claim 1, wherein the superelastic material comprises a nickel-titanium alloy.
5. The correction device of claim 1, wherein the support member comprises a pair of supporting rods.
6. The correction device of claim 5, further comprising a cross-link element
20 joined between the supporting rods.
7. The correction device of claim 5, wherein one of the supporting rods is at least partially formed of a superelastic material.
8. The correction device of claim 1, wherein the support member is at least partially formed of a superelastic material.
- 25 9. The correction device of claim 8, wherein the support member is pre-contoured to assume the normal kyphosis and lordosis of the spine.

10. The correction device of claim 1, comprising first and second anchor members, wherein the first anchor member comprises a transverse traction element which is capable of providing an independent constant or substantially constant transverse traction force.

5 11. The correction device of claim 10, wherein first and second anchor members are attached to each other.

12. The correction device of claim 1, wherein the anchor member is at least partially formed of a superelastic material.

10 13. The correction device of claim 1, wherein the anchor member is locked to join the support member with the deformed spine portion by a mechanical tool.

14. The correction device of claim 1, wherein the anchor member is locked to join the support member with the deformed spine portion by a remote access means.

15 15. The correction device of claim 14, wherein the remote access means comprises an electromagnetic radiation member.

15 16. The correction device of claim 1, further comprising a braking element for adjusting the correction force.

17. The correction device of claim 1, further comprising a restraining element for limiting the movement of the support member.

20 18. The correction device of claim 14, wherein the restraining element prevents the support member from rotation.

19. A device for correcting spinal deformities, comprising:
a support member adapted to be mounted onto a portion of a spine; and
an anchor member adapted to join a portion of the support member to a deformed spine portion;

25 wherein at least one of the support member and the anchor member is capable of providing a constant or substantially constant correction force to the deformed spine

portion and maintains the constant correction force until the spinal deformities are fully or substantially fully corrected.

20. A method of providing a constant or substantially constant force for correcting spinal deformities, comprising:

- 5 providing a correction force having a predetermined amount, the correction force being generated by a superelastic or pseudoelastic material; and
 maintaining the correction force at the predetermined amount until the spinal deformities are fully or substantially fully corrected.

10 21. The method of claim 20, wherein the predetermined amount of the correction force can be adjusted.

22. The method of claim 20, wherein the correction force is activated during the spine correction surgery.

23. The method of claim 20, wherein the correction force is activated after the spine correction surgery.

15 24. The method of claim 20, wherein the correction force is heat activated.

25. The method of claim 24, wherein the correction force is activated at the human body temperature.

26. The method of claim 20, wherein the correction force is remotely activated.

20 27. The method of claim 26, wherein the correction force is activated electromagnetically.

28. The method of claim 20, wherein the correction force is applied to the deformed spine portion from the anterior aspect of the spine.

29. The method of claim 20, wherein the correction force is applied to the deformed spine portion from the posterior aspect of the spine.

30. The device of claim 1, wherein the support member is adapted to be attached to the anterior aspect of the spine.

31. The device of claim 1, wherein the support member is adapted to be attached to the posterior aspect of the spine.